

WHAT IS CLAIMED IS:

59
317

1. A method of sealing a hole in a body part, comprising:
introducing a generally cylindrical shaped mesh into the hole; and
moving at least one end of the cylindrical shaped mesh at least partially
through an interior portion of the cylindrical shaped mesh such that the mesh expands radially
outwards against sides of the hole.

2. The method of claim 1, wherein moving at least one end of the
cylindrical shaped mesh at least partially through an interior portion of the cylindrical shaped
mesh comprises:

advancing a proximal end of the mesh in a distal direction.

3. The method of claim 2, wherein the proximal end is advanced in a
distal direction by a push rod.

4. The method of claim 2, wherein the proximal end is advanced distally
past the distal end.

Suba 17
5. The method of claim 2, wherein the mesh bulges around the perimeter
of the proximal end of the hole.

59
327

6. The method of claim 1, wherein moving at least one end of the
cylindrical shaped mesh at least partially through an interior portion of the cylindrical shaped
mesh comprises:

advancing a distal end of the mesh in a proximal direction.

7. The method of claim 6 wherein the distal end is advanced proximally
past the proximal end.

Suba 27
8. The method of claim 6, wherein the mesh bulges around the perimeter
of the distal end of the hole.

9. The method of claim 6, wherein the distal end is advanced in a
proximal direction by pulling on a tether attached to the distal end of the mesh.

19
0337

10. The method of claim 1, wherein the body part is a bony structure.

11. The method of claim 10, wherein the body part is a vertebral annulus.

12. The method of claim 1, wherein the cylindrical shaped mesh is introduced into the hole by:

inserting a tubular inserter into the hole, wherein the mesh is received within a central bore of the tubular inserter; and

withdrawing the tubular inserter from the hole while holding the mesh in the hole.

13. The method of claim 12, further comprising:

pushing the proximal end of the mesh in a distal direction with a cylindrical inserter received within the tubular inserter.

~~14. A method of sealing a hole in a body, comprising:~~

~~introducing a generally cylindrically shaped mesh into the hole; and~~

~~pushing a proximal end of the cylindrically shaped mesh at least partially through itself.~~

~~15. A method of sealing a hole in a body, comprising:~~

~~introducing a cylindrically shaped mesh into the hole; and~~

~~pulling a distal end of the cylindrically shaped mesh at least partially back through itself.~~

~~16. A device for sealing a hole in a body, comprising:~~

~~a generally cylindrical mesh formed from a plurality of helical strands.~~

~~17. The device of claim 16, wherein the helical strands are formed from suture material.~~

Sub a3

09663250 091500 005769 0525960

1 18. The device of claim 16, wherein the mesh comprises a flexible tube of
2 interwoven springs.

1 *Subau 7* 19. The device of claim 16, wherein at least one of the proximal and distal
2 ends of the cylindrically shaped mesh are covered by an end cap.

1 20. The device of claim 19, wherein the end cap is made of mesh.

1 21. The device of claim 16, wherein,
2 at least one end of the cylindrical mesh comprises a non-expandable circular
3 ring.

1 22. The device of claim 21, wherein,
2 both the distal and proximal ends of the mesh comprise non-expandable
3 circular rings, wherein the diameter of the one end is smaller than the diameter of the other
4 end.

1 *Sub a57* 23. The device of claim 24, wherein,
2 the diameter of the proximal end is slightly smaller than the diameter of the
3 distal end such that the proximal end can be snap-fit through the distal end.

1 24. The device of claim 16, further comprising:
2 a plurality of suture-tethers connected to the distal end.

1 25. The device of claim 16, wherein the mesh has a diameter of
2 approximately 1 to 8 millimeters.

1 26. The device of claim 25, wherein the mesh has a diameter of
2 approximately 3 millimeters.

1 27. The device of claim 16, wherein the helical strands are made of
2 polypropylene.

1 28. The device of claim 16, wherein the helical strands have individual
2 diameters of approximately 0.15 millimeters.

1 29. The device of claim 16, wherein the distal end is tapered.

1 30. A device for sealing a hole in a body, comprising:

2 a sheet-like structure comprising a plurality of radially extending
3 petals, the petals being adapted to flex radially outwards when bent inwards into a generally
4 conical shape.

1 31. The device of claim 30, further comprising:

2 a barb disposed on the distal end of each of the petals.

1 32. The device of claim 30, wherein the petals tend to spring radially
2 outwards such that the structure tends to assume a planar form.

1 33. A method of sealing a surgically formed hole in a body, comprising:

2 inwardly bending a plurality of petals extending from a generally planar sheet
3 of material, such that the sheet of material assumes a conical shape;

4 introducing the structure into the hole;

5 allowing the bent petals to spring radially outwardly, such that the petals of the
6 structure push against the walls of the hole, thereby anchoring the structure in the hole.

1 34. The method of claim 30, wherein the structure is inserted into the hole
2 with the petals angled in a proximal direction.

1 35. A method for sealing a hole in a body, comprising:

2 inserting a plurality of sheet-like structures into the hole, each comprising a
3 plurality of radially extending petals, the petals being adapted to flex radially outwards when
4 bent inwards into a generally conical shape.

1 36. The method of claim 35, wherein two structures are inserted into the
2 hole with their respective apexes facing towards one another.

1 37. The method of claim 36, wherein the two apexes further each comprise
2 an interlocking portion such that the two structures are interlocked together.

- 1 38. The method of claim 35, wherein each of the two structures are
2 initially inserted with their apexes pointing away from one another.

Add a⁶7

09663250 091500
005760" 05229960